

VU Research Portal

A note on the unemployed individual's marginal willingness to pay for the remaining entitlement period

van Ommeren, J.N.

2002

document version

Early version, also known as pre-print

[Link to publication in VU Research Portal](#)

citation for published version (APA)

van Ommeren, J. N. (2002). *A note on the unemployed individual's marginal willingness to pay for the remaining entitlement period*. (RM; No. 2002-13). Ruimtelijke Economie (RE).

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal ?

Take down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

E-mail address:

vuresearchportal.ub@vu.nl

SERIE RESEARCH MEMORANDA

A Note on the Unemployed Individual's Marginal Willingness to Pay for the
Remaining Entitlement Period

Jos van Ommeren

Research Memorandum 2002-13

March 2002

vrije Universiteit *amsterdam*



**A Note on the Unemployed Individual's Marginal Willingness to Pay for the
Remaining Entitlement Period.**

Jos van Ommeren

Free University, The Netherlands

14-03-2002

Free University, FEWEB, Amsterdam, De Boelelaan, 1108 HV Amsterdam

Email: jommeren@feweb.vu.nl

A Note on the Unemployed Individual's Marginal Willingness to Pay for the Remaining Entitlement Period

Abstract.

This paper introduces a method to estimate the unemployed individual's marginal willingness to pay for the remaining entitlement period by application of search theory. It is demonstrated that search theory implies that the unemployed individuals' marginal willingness to pay the remaining entitlement period must be less than the value of the unemployment benefit. When benefits exhaust though, the willingness to pay for an additional period must be equal to the benefit received during that period. The empirical relevance of this method is shown by re-interpreting the studies of Meyer (1990) and Katz and Meyer (1990) .

JEL: H53, J64, J65; Keywords: unemployment duration, unemployment benefits, marginal willingness to pay, search theory, nonstationary model.

1. INTRODUCTION

A large number of studies has examined the effect of the level of the unemployment insurance benefit on unemployment leaving behaviour (see Atkinson and Micklewright, 1991). Although this effect appears to vary over countries and periods, it emerges that unemployment benefits generally reduce the probability of leaving unemployment, in particular in the US.

More recently, studies have focused on the consequences of the length of the unemployment benefit period for the unemployed individuals. The length of the unemployment benefit period has received considerable attention by policy makers. It is generally thought that an extensive benefit period reduces the incentives of unemployed individuals to search and to accept job offers. In line with this idea are, empirical studies generally find that the remaining entitlement period of receiving unemployment insurance has a negative effect on unemployment leaving behaviour. The probability of leaving

unemployment rises sharply just prior to **when** benefits exhaust (see, Meyer, 1990; Katz and Meyer, 1990; Lindeboom and Theeuwes, 1993; Carling et al., 1996).

The differences in **policies** with respect to the length of the unemployment benefit period are extremely large between countries. In **many** European countries, the length of the unemployment benefit period has been reduced in order to combat high levels of unemployment and to **reduce** the expenses on unemployment benefits sector. This raises the question what the **effects** are of a reduction in the length of the unemployment **benefit** period on the welfare of unemployed job seekers. In other words, what is the unemployed individuals' willingness to **pay** for one additional week of **benefit**? In this paper I **will** **provide** estimates for the unemployed individual's marginal willingness to **pay** for the remaining entitlement period of unemployment insurance (MWP) based on Meyer (1990) and Katz and Meyer (1990). Thus, this paper shows **how** the effect of an extension of the entitlement period on individuals' welfare **can** be estimated.

In the current paper, I **will** make use of the studies by Katz and Meyer (1990) and Meyer (1990) since these two studies include **rather precise** information on the relationship between the unemployment duration and **the** remaining entitlement period of receiving unemployment **benefit**. The empirical estimates of the unemployment leaving hazard **rates** are used to estimate the individual's value of the remaining entitlement period of receiving unemployment **benefit**.¹ The obtained estimates are consistent with the theoretical model: the unemployed individuals' willingness to **pay** for a week increase of the remaining entitlement period is less than the **difference** between the weekly unemployment **benefit received** before and **after** exhaustion. **When** benefits exhaust though, the willingness to **pay** for an additional week is approximately equal to this **difference**.

The outline of the paper is as follows. In **section** two, I introduce a search model acknowledging that unemployment **benefits** are paid for a **fixed** time. I derive the individuals' marginal willingness to **pay** for the remaining entitlement period of receiving unemployment benefit. In **section** three, the estimation method for the MWP is shortly

¹The studies of Herzog and Schlottmann (1990), Gronberg and Reed (1994) and Van Ommeren et al. (2000) use similar estimation methods and data on job moving behaviour to estimate the willingness to **pay** for **nonwage** job attributes. Gronberg and Reed (1994) **relate** these estimation methods to search theory.

discussed. The empirical relevance of the method to estimate the individuals' value for the remaining entitlement period is then demonstrated in section four. Section five concludes the paper.

2. METHODOLOGY

2.1 The basic model

The point of departure in this paper is an unemployed individual (see Mortensen, 1977). Let b denote the unemployment benefit level paid during an infinitesimal period for an unemployed person who is qualified for unemployment insurance. When unqualified, the person receives unemployment income b_0 , whereas $b_0 < b$. τ is the period until benefit exhaustion. The person searches in the labour market with effort s ($s > 0$) at a cost of $k(s, \tau)$. Search costs $k(s, \tau)$ are increasing and convex in search effort s , hence $k'(s, \tau) > 0$ and $k''(s, \tau) > 0$. The person receives a wage offer at rate $\alpha(s, \tau)$. The job arrival rate $\alpha(s, \tau)$ is increasing and concave in s , hence $\alpha'(s, \tau) > 0$ and $\alpha''(s, \tau) < 0$. Wage offers are drawn from a known distribution $F(w)$. Pooling of offers is not allowed: job offers are either refused or accepted before other offers arrive. When a job offer is accepted, employed persons may or may not continue searching for another job.

The expected present value of being unemployed with period τ remaining until benefit exhaustion is denoted as $U(\tau)$. So, τ is the remaining entitlement period of receiving unemployment benefit. The future is discounted at rate ρ . The individual has to decide the optimal amount of search effort and whether to accept a job offer, taking into account the expected offers in the future. The individual is assumed to maximise U . The value of being unemployed when period τ remaining can be written as the following differential equation:

$$U(s, \tau) = \{b - k(s, \tau) - \frac{\partial U(s, \tau)}{\partial \tau} + \alpha(s, \tau)E \max[W(x), U(s, \tau)] + [1 - \alpha(s, \tau)]U(s, \tau)\} \frac{1}{1 + \rho}, \quad (1)$$

where W is the value of accepting a job. The expectation is taken with respect to the distribution of wage offers, x . The term $\frac{\partial U(s, \tau)}{\partial \tau}$ equals the depreciation in U as benefits are due to expire at $\tau = 0$ (see, similarly, Mortensen, 1986 and Van den Berg, 1990). The value of unemployment after benefits have been exhausted is:

$$U(s, 0) + \{b_0 - k(s, 0) + \alpha(s, 0)E \max[W(x), U(s, 0)] + [1 - \alpha(s, 0)]U(s, 0)\} \frac{1}{1 + \rho}, \quad (2)$$

The individual maximises the value of being unemployed by choosing the optimal search effort level, s , and the optimal reservation wage, denoted as r . The reservation wage is defined as the minimal wage that induces job acceptance. The optimal search effort level can be obtained by the first-order condition $\partial U / \partial s = 0$. By noting that $\frac{\partial^2 U}{\partial \tau \partial s} = 0$, this first-order condition can be written as:

$$-\frac{\partial k}{\partial s} + \frac{\partial \alpha}{\partial s} E \max[W(x), U(s, \tau)] = 0, \quad \text{if } s > 0. \quad (3)$$

Hence, the marginal search costs equal the marginal expected benefits of search. In the case that the first-order condition has no solution for $s > 0$, then s is 0. Furthermore, it has been shown many times that the reservation wage r is determined by the following condition (e.g. Mortensen, 1986):

$$W(r) = U(s, \tau). \quad (4)$$

Usually, the optimal choice of s and r depend on the remaining entitlement period τ , since (3) and (4) imply that $s = s(U(s, \tau))$ and $r = r(U(s, \tau))$. It can be readily shown that the optimal search effort level increases and the reservation wage decreases as the

unemployed individual approaches benefit exhaustion (since $\frac{\partial U}{\partial \tau} > 0$). In addition, the model predicts that the optimal search effort level increases and the reservation wage decreases sharply just before benefits exhaust (since $\frac{\partial^2 U}{(\partial \tau)^2} < 0$).

2.2 Marginal willingness to pay for the remaining entitlement period

In the literature on workers' search behaviour and marginal willingness to pay for job attributes, studies have derived the value of job attributes based on their instantaneous value to the workers (Gronberg and Reed, 1994 and Van Ommeren et al., 2000). Here, in contrast, we derive the marginal willingness to pay for the remaining benefit period based on the (discounted) present value U . The remaining period τ is valuable to the unemployed individual since it affects the value of being unemployed in the future. The derivation of the MWP for the benefit period is straightforward.

Let us first focus on the hazard rate of leaving unemployment $\theta(\tau)$. The hazard rate of leaving unemployment can be written as:

$$\theta(\tau) = a(U(s, \tau))[1 - F(r(U(s, \tau)))]. \quad (5)$$

Differentiation of θ with respect to τ and b respectively, by application of the chain rule, and taking the ratio of these derivatives gives us:

$$\frac{\partial \theta}{\partial \tau} / \frac{\partial \theta}{\partial b} = \frac{\partial U}{\partial \tau} / \frac{\partial U}{\partial b}. \quad (6)$$

Hence, it has been shown that the ratio of the marginal hazard rate of τ over the marginal hazard of the benefit equals the ratio of the marginal present value of τ over the marginal present value of the benefit.

The unemployed individuals' MWP for the remaining entitlement period τ is defined as the ratio of the marginal present value of being unemployed of the remaining

entitlement period τ over the marginal present value of being unemployed of benefit b , since the MWP is defined as the marginal rate of substitution between the remaining entitlement period and the level of the current unemployment insurance benefit ($MWP = \frac{\partial U}{\partial \tau} / \frac{\partial U}{\partial b}$). By using equation (6), we obtain:

$$MWP = \frac{\partial \theta}{\partial \tau} / \frac{\partial \theta}{\partial b}. \quad (7)$$

Hence, I have shown that the unemployed individuals' marginal willingness to pay for the remaining entitlement period equals the ratio of the marginal hazard rate of τ over the marginal hazard of the benefit.

It can be easily shown that $\frac{\partial^2 U}{(\partial \tau)^2} < 0$ and $\frac{\partial^2 U}{\partial \tau \partial b} > 0$. The latter inequality implies that when the remaining entitlement period reduces, the marginal effect of the benefit becomes smaller. As a consequence, $\frac{\partial MWP}{\partial \tau} < 0$. Hence, in line with intuition, MWP is decreasing in τ and obtains its maximum when the unemployed individual approaches benefit exhaustion.

Now suppose that when the remaining period τ equals one, the probability of leaving unemployment before exhaustion can be ignored. In the case that the unemployment period is measured in weeks, this is a realistic assumption. In this case, differential equations (1) and (2) render an explicit solution for $U(\tau)$ since $\rho U(\tau)$ can be written as $b(1 - \exp^{-\rho\tau}) + \exp^{-\rho\tau} b_0$. This implies that,

$$\frac{\partial U(\tau)}{\partial b} = \frac{1 - \exp^{-\rho\tau}}{\rho}, \quad \frac{\partial U(\tau)}{\partial \tau} = (b - b_0) \exp^{-\rho\tau} \text{ and } MWP = (b - b_0) \frac{\rho \exp^{-\rho\tau}}{1 - \exp^{-\rho\tau}}.$$

So, when τ equals one, the MWP can be approximated $b - b_0$, since ρ is small (e.g. 0.001 as τ is measured in weeks). This latter result makes sense. In the case that the probability of leaving unemployment before benefits exhaust is negligible, the gain in the value of

being unemployed caused by a marginal increase in the entitlement period is equal to the difference between the level of the benefit before and after exhaustion.

In conclusion, search theory allows us to calculate the unemployed individuals' marginal willingness to pay for the remaining entitlement period as the ratio of the marginal hazard rate of τ over the marginal hazard of the benefit. Furthermore, under the assumptions stated, search theory points out that:

- 1) when τ equals one, the MWP is equal to the difference between the level of benefits received before and after exhaustion.
- 2) the MWP is decreasing in τ .

I will test for these two implications in section four.

3. ESTIMATION

Empirical hazard models are generally based on the proportional hazard assumption, which implies that:

$$\theta_i(t) = \theta_0(t) \exp\{z_i(t)' \beta\} \quad (8)$$

where $\theta_0(t)$ is the baseline hazard at time t ; $z_i(t)$ is a vector of time dependent variables for individual i . $z_i(t)$ includes the benefit level, b_i , and a spline that captures the time remaining τ .² β is a vector of parameters. Hence, β_b is the additional effect on the hazard of a marginal increase in the benefits; β_τ is the additional effect on the hazard of having moved a period farther from exhaustion when one is τ periods away. Given (7) and (8), it appears that:

$$MWP = \frac{\beta_\tau}{\beta_b} \quad (9)$$

In consequence, estimates of β_τ/β_b can be interpreted as estimates of the marginal willingness to pay for the remaining entitlement when τ periods from exhaustion. In empirical applications of unemployment leaving behaviour, a common specification is that $z_i(t)$ includes the logarithm of the benefit level. In this case:

²For a discussion of appropriateness of the specification see also Moffit (1985) and Katz and Meyer (1990).

$$MWP = b \frac{\beta_{\tau}}{\beta_b} \quad (10)$$

Hence, the MWP is proportional to the benefit level at exhaustion.

4. EMPIRICAL APPLICATION

In this section, I focus on the empirical studies of Meyer (1990) and Katz and Meyer (1990) that both examine unemployment leaving behaviour in the US by means of a proportional hazard model. Semiparametric estimation techniques are used to estimate the models.

I have chosen to focus on studies for the US, since the method proposed to estimate the willingness to pay for the remaining entitlement period depends on the assumption that unemployment leaving behaviour is decreasing in the benefit level. It has been generally found that an increase in the benefit level increases the length of the unemployment spell in the US, but not necessarily in other countries (see Atkinson and Micklewright, 1991).

Meyer (1990) analyses the Continuous Wage and Benefit History unemployment insurance records. Males from twelve states in the U.S. during the period 1978-1983 are examined. The advantage of these data is the accurate information on weeks of unemployment insurance receipt, the levels of the unemployment insurance and the remaining entitlement period of receiving unemployment benefit. In addition, it is fairly large, since it contains 3365 observations. When becoming unemployed, the individual is, on average, entitled to 34 weeks of benefit entitlement (with a minimum of 8 and a maximum of 55 weeks). On average, an unemployed individual receives benefits during 13 weeks (with a minimum of 1 and a maximum of 39). The average value includes 985 right censored spells; 201 of these were censored at the exhaustion of benefits.

Unemployment benefits drop to zero when benefits exhaust (see Katz and Meyer, 1990). The effects of unemployment insurance (UI) are measured using functions of the benefit level and the time until benefits lapse. The logarithm of the weekly UI benefit and a spline that captures the time until benefits lapse are included as determinants of the

hazard **rate** of leaving unemployment. Since the logarithm of the weekly UI **benefit** is employed, MWP will be calculated using equation (10).

Meyer (1990) **defines** the spline in **time** until exhaustion as follows: the coefficient on UI 2-5 is the additional effect on the hazard of **having** moved 1 week closer to exhaustion **when** one is 2-5 weeks away. The coefficient on UI 1 is the additional effect on the hazard **when** one moves from 2 to 1 week **from** exhaustion. Thus, the effect of moving **from** 6 weeks away to 1 week is 4 **times** the UI 2-5 **coefficient** plus the UI 1 coefficient. The other UI coefficients have analogous interpretations.

Employing a range of different specifications, Meyer (1990) **finds** that the probability of leaving unemployment **rises** dramatically just prior to **when** benefits lapse (see Table 1). From 2 to 1 week until exhaustion the hazard **almost** doubles. Cumulatively, the hazard increases at least threefold (in some **specifications** even **fivefold**) as one moves **from** 6 weeks until 1 week until exhaustion. In addition, a 10 percent increase in benefits is associated with an 8.8 percent decrease in the hazard.

In the current paper, I **will** re-interpret these estimates in order to estimate the implied MWP.³ The willingness to **pay** for one additional week is calculated as minus the willingness to **pay** for moving one week closer to **exhaustion**.⁴ I have used **one-sided**-tests, since the search model **indicates** that the marginal willingness to **pay** for the remaining entitlement period is positive.

The results imply that the willingness to **pay** for one additional week entitlement is 79 dollars, about 76% of the **mean benefit** level, **when** one moves **from** 2 to 1 week from exhaustion. **When** one moves **from** 6 to 2 weeks, the marginal willingness to **pay** is 22 dollars, about 21% of the **mean benefit** level. **When** one moves **from** 55 to 41 weeks, the marginal willingness to **pay** is 3.42 dollars, about 3% of the **mean benefit** level. The

³ I report here the estimates based on specification (5) in Meyer (1990). The estimates of the MWP based on other specifications are close to the estimates implied by specification (5).

⁴ The standard error of the estimates of MWP is derived using the delta method, which requires the covariance of β_t and β_b . As it is common **practice** not to report the covariance of the **coefficients**, I report standard errors presuming **the** covariance of β_t and β_b is zero. Nevertheless, assuming other values for the correlation between β_t and β_b are highly inconsequential for the reported precision of the MWP estimates and does not affect **any** of the conclusions.

latter estimate is significant at the 0.05 significance level using a one-sided t-test. The total value of entitlement (for 55 weeks) is 1.94 times the mean weekly benefit level.

The empirical outcomes are plausible and are in line with the theoretical model. First, the estimated MWP increases sharply as benefit exhaustion is approached. Second, the estimated willingness to pay for one additional week entitlement is significantly less than the benefit level when the remaining entitlement period is longer than 2 weeks: the hypothesis that MWP is less than the current benefit level when one moves from 6 to 2 weeks from exhaustion is rejected at the 0.001 level (given a point estimate of 21% of the mean benefit and a standard error of 9%).

Third, the willingness to pay for one additional week entitlement is *not* statistically different from the level of benefit when one moves from 2 to 1 week from exhaustion at conventional significance levels: given a point estimate of 76% of the mean benefit and a standard error of 34%: the hypothesis that the MWP differs from the mean benefit level cannot be rejected at the 0.05 significance level. Such a result is in line with the theoretical predictions of the search model when unemployment benefits drop to zero when benefits exhaust ($b_0 = 0$).

It has been suggested in the literature (see Mortensen, 1977; Tannery, 1983; Wadsworth, 1991) that the search model introduced in this paper may not be appropriate, since the search costs $k(s, \tau)$ depend on benefit b . The argument is that the search model should acknowledge that search costs consist of search time and monetary expenses, which are complementary. One of the implications is that search effort levels may be increasing in the benefit level b . This also implies that equation (7) does not hold and, therefore, the MWP does *not* equal the difference between the level of benefits received before and after exhaustion, when τ is one. Note however that the study of Meyer (1990) does not reject the hypotheses that MWP equals the difference between the level of benefits received before and after exhaustion when τ is one, which is supportive for the claim that equation (7) may be used to estimate the marginal willingness to pay for the remaining entitlement period.

The study of Katz and Meyer (1990) analyses the same data slightly different, but benefits are included in levels (instead of the logarithm of the benefits as in Meyer

(1990)). As can be seen from Table 2, the estimates of the MWP are very similar to those reported in Table 1.⁵ The study of Katz and Meyer (1990) suggests that the point estimates of the MWP are somewhat higher when the remaining period is less than 5 weeks (however, these estimates are statistically less different from zero). The week before benefits exhaust, the point estimate of the willingness to pay for the remaining period is 108.9, which, in line with the search model entitlement, is very close to the mean weekly benefit level, which is 104.2. Hence, our conclusions regarding MWP are invariant to the specification of the effect of the benefit on the hazard rate.

One of the attractions of the use of the MWP estimates is that it avoids one of the difficulties encountered by Katz and Meyer (1990) who show that an extension of the entitlement period reduces income (the sum of benefits and wages) of unemployment insurance recipients due to disincentive effects of extended benefits on unemployment duration. However, they argue that an extension must in principle *increase* welfare, since welfare does not only include income but also the utility of the leisure from being unemployed and the opportunity of obtaining a job offer with higher earnings. In line with their arguments, I find estimates which imply that an extension of the entitlement period increases individuals' welfare.

5. CONCLUSION

In this paper, it has been shown that the unemployed individuals' marginal willingness to pay for the remaining entitlement period of receiving unemployment benefit can be derived from data on unemployment mobility behaviour. The empirical relevance of this approach is demonstrated based on empirical studies in the US (Meyer, 1990; Katz and Meyer, 1990). In line with theory, the unemployed individuals' willingness to pay for a week increase of the remaining entitlement period is less than the difference between the weekly unemployment benefit received before and after exhaustion. When benefits

⁵ Katz and Meyer (1990) also give the results of another specification that includes interactions of the benefit level and the period until exhaustion. Derivation of the MWP does require then more information than presented by Katz and Meyer (1990).

exhaust though, the willingness to pay for an additional week is approximately equal to this difference.

LITERATURE

- Atkinson, A. B. and J. Micklewright (1991), Unemployment compensation and labor market transitions: a critical review, *Journal of Economic Literature*, 29, 1679-1727
- Carling, K., P. Edin, A. Harkman and B. Holmlund (1996), Unemployment duration, unemployment benefits and labor market programs in Sweden, *Journal of Public Economics*, 59, 3 13-334
- Gronberg, T J. and W.R. Reed (1994), Estimating workers' marginal willingness to pay for job attributes using duration data, *Journal of Human Resources*, 24,911 -93 1
- Herzog, H.W. Jr. and A.M. Schlottmann (1990), Valuing risk in the workplace: market price, willingness to pay, and the optimal provision of safety, *Review of Economics and Statistics*, 72, 463-470
- Katz, L. and B. Meyer (1990), The impact of the potential duration of benefits on the duration of unemployment, *Journal of Public Economics*, 41, 45-72
- Lindeboom, M. and J. Theeuwes (1993), Search, benefits and entitlement, *Economica*, 60, 327-347
- Meyer, B.D. (1990), Unemployment insurance and unemployment spell, *Econometrica*, 58, 757-782
- Moffit, R. (1985), Unemployment insurance and the distribution of unemployment spells, *Journal of Econometrics*, 28, 85-101
- Mortensen, D. (1977), Unemployment insurance and job search decisions, *Industrial and Labor Relations Review*, 30, 505-5 17
- Mortensen, D. (1986), Job search and labor market analysis. In O. Ashenfelter and R. Layard (eds.), *Handbook of Labor Economics*, Amsterdam, North-Holland
- Tannery, F. (1983), Search effort and unemployment insurance reconsidered, *Journal of Human Resources*, 18, 433-440

- Van den Berg, G.J. (1990), Nonstationarity in job search theory, *Review of Economic Studies*, 5, 255-277
- Van Ommeren, J.N., G.J. Van den Berg, and C. Gorter (2000), Estimating the marginal willingness to pay for commuting, *Journal of Regional Science*, 40, 3, 541-563
- Wadsworth, J. (1991), Unemployment benefits and search effort in the U.K. labour market, *Economica*, 58, 17-34

Table 1. Coefficients of unemployment hazard model estimates with respect to unemployment attributes, males, 1978-1983, U.S. (based on Meyer, 1990), and the MWP for the entitlement period.

variables	coefficient	MWP/mean benefit	MWP
Log weekly UI level	-0.8757		
	(0.2065)		
Exhaustion spline:			
UI1	0.6670	76.17	79.36
	(0.25 13)	(33.67)	(35.02)
UI 2-5	0.1847	21.09	21.94
	(0.0634)	(8.77)	(9 12)
UI 6-10	0.0052	0.59	0.61
	(0.0336)	(3.83)	(3.98)
UI 11-25	-0.0102	-1.16	-1.21
	(0.0078)	(0.91)	(0 95)
UI 26-40	0.0015	0.17	0.18
	(0.0075)	(0.85)	(0.88)
UI 41-54	0.0289	3.30	3.42
	(0.0152)	(1.86)	(1.93)

Notes: standard errors in parentheses. The exhaustion spline variables are explained in the text. MWP is calculated presuming that the weekly benefit is equal to the mean weekly benefit level, which is 104.2 (in 1977 dollars).

Table 2. Coefficients of unemployment hazard model estimates with respect to unemployment attributes, males, 1978-1983, U.S. (based on Katz and Meyer, 1990), and the MWP for the entitlement period

Variables	coefficient	MWP
Weekly UI level	-0.0053 (0.0014)	
Exhaustion spline:		
UI1	0.577 (0.249)	108.87 (55.08)
UI 2-5	0.166 (0.062)	31.32 (14.33)
UI 6-10	0.005 (0.032)	0. 94 (6.02)
UI 11-25	-0.006 (0.007)	-1.03 (1.21)
UI 26-40	0.006 (0.007)	1.03 (1.21)
UI 41-54	0.021 (0.138)	3.96 (26.02)

Notes: standard errors in parentheses. The exhaustion spline variables are explained in the text.